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3759 Bond, W. L., Precision Lattice Constant Determination, Acta Crystallographica, 13, pp. 814-818, 1960.

3763 Easley, J. W. and Blair, R. R., Fast Neutron Bombardment of Germanium and Silicon Esaki Diodes, J. Appl. Phys., 31, pp. 1772-1774, Oct. 1960.

3767 Guttman, N., van Bergeijk, W. A. and David, E. E., Jr., Monaural Temporal Masking Investigated by Binaural Interaction, J. Acoustical Soc. Amer., 32, pp. 1329–1336, Oct. 1960.

3777 Van Uitert, L. G. and Soden, R. R., Emission Spectrum of Trivalent Holmium in the Scheelite Structure, J. Chem. Phys., 28, pp. 1532-1534, Nov. 1960.

3778 Herring, C., Effect of Random Inhomogeneities on Electrical and Galvanomagnetic Measurements, J. Appl. Phys., 31, pp. 1939-1953, Nov. 1960.

3782 Chynoweth, A. G. and Feldman, W. L., Domain Delineation and Domain Arrays Produced by Thermal Shocks, Phys. and Chem. of Solids, 15, pp. 225–233, Oct. 1960.

3783 Heezen, B. C., Natural Processes Contributing to Mechanical Failure of Deep-Sea Cables, Geophysical J., 2, pp. 142-163, June 1959.

3784 Reed, E. D., Diode Parametric Amplifiers: Principles and Experiments, Semiconductor Products, 4; Part 1, pp. 25–30, Jan. 1961; Part 2 pp., 35–42, Feb. 1961.

3785 Archer, R. J., Stain Films on Silicon Phys. and Chem. of Solids, 14, pp. 104-110, July 1960.

3786 Collins, R. J. and Hopfield, J. J., Polarization of the Edge Emission in CdS, Phys. Rev., 120, pp. 840-842, Nov. 1, 1960.

3787 Comstock, R. L. and Fay, C. E., Operation of the Field Displacement Isolator in Rectangular Waveguide, I.R.E. Trans. on Microwave Theory and Techniques, MTT. 8, pp. 605– 661, Nov. 1960.

3788 Denes, P. and Mathews, M. V., Spoken Digit Recognition Using Time-Frequency Pattern Matching, J. Acoustical Soc. Amer. 32, pp. 1450-1455, Nov. 1960.

3789 Gobeli, G. W. and Allen, F. G., Surface Measurements on Freshly Cleaved Silicon p-n Junctions, Phys. and Chem. of Solids, 14, pp. 23-26, July 1960.

3790 Hagstrum, H. D., Studies of Auger Electrons Ejected From Germanium by Slowly Moving Positive

<sup>\*</sup>This listing covers monographs 3678 through 3935 and is not inclusive, covering only those monographs of articles not published in this journal.

*Ions*, Phys. and Chem. of Solids, 14, pp. 33-36, July 1960.

3791 Hopfield, J. J., Fine Structure in the Optical Absorption Edge of Anisotropic Crystals, Phys. and Chem. of Solids, 15, pp. 97-107, Aug. 1960.

3792 Lander, J. J., Reactions of Lithium as a Donor and an Acceptor in Zinc Oxide, Phys. and Chem. of Solids, 15, pp. 324-334, Aug. 1960.

3794 Luongo, J. P., Infrared Study of Polypropylene, J. Appl. Polymer Sci., 3, pp. 302–309, May/June 1960.

3795 McLean, D. A., A-c Properties of Tantalum Solid Electrolytic Capacitors, J. Electrochem. Soc., 108, pp. 48–56, Jan. 1961.

3796 Thomas, D. G., Exciton Spectrum of Zinc Oxide, Phys, and Chem. of Solids. 15, pp. 86–96, Aug. 1960.

3797 Wolff, P. A., Spin Susceptibility of an Electron Gas, Phys. Rev., 120, pp. 814–819, Nov. 1, 1960.

3798 Hawkins, W. L., Worthington, M. A. and Winslow, F. H., Role of Carbon Black in Thermal Oxidation of Polyolefins, Proc. Fourth Conf. on Carbon, pp. 63-69, 1959.

3799 Westover, R. F., Effect of Hydrostatic Pressure on Polyethylene Melt Rheology, Soc. Plastics Engrs. Trans. 1, pp. 14–20, Jan. 1961.

3800 Anderson, T. C. and Merrill, F. G., Crystal-Controlled Primary Frequency Standards, I.R.E. Trans. on Instrumentation, I-9, pp. 136-140, Sept. 1960.

3801 Baker, R. G. and Spencer, A. T., Structural Bonding of Polyolefins, Ind. and Engr. Chem., δ2, pp. 1015–1017, Dec. 1960.

3802 Blumberg, W. E. and Eisinger, J., Effective Mass in Gray Tin From Knight Shift Measurements, Phys. Rev., 120, pp; 1965-1968, Dec. 15, 1960.

3803 Boyle, W. S. and Brailsford, A. D., Far Infrared Studies of Bismuth,

Phys. Rev., 120, pp. 1934-1949, Dec. 15, 1960.

3804 Bozorth, R. M., New Varieties of Magnetic Materials, Research, 13, pp. 485-491, Dec. 1960.

3805 Bratschi, R. W., Pennington, W. D and Whitman, A. L., Teletype-writer Selective Calling Applied to Automatic Airline Reservations, A.I.E.E. Trans, 51, Pt. 1, pp. 579–583, Nov. 1960.

3806 David, E. E., Jr., Digital Simulation in Research on Human Communication, Proc. I.R.E., 49, pp. 319-328, Jan. 1961.

3807 Davies, L. W. and Storm, A. R., Jr., Recombination Radiation From Silicon Under Strong-Field Conditions, Phys. Rev., 121, pp. 381-387, Jan. 15, 1961.

3808 Dodson, G. A. and Howard, B. T., High Stress Aging to Failure of Semiconductor Devices, 1961 Proc. of Seventh Natl. Symp. on Reliability and Quality Control in Electronics, pp. 262-272.

3809 Flanagan, J. L., Analog Measurements of Sound Radiation From the Mouth, J. Acoustical Soc. Amer., 32, pp. 1613–1620, Dec. 1960.

3810 Foulkes, J. D., Computer Identification of Vowel Types, J. Acoustical Soc. Amer., 33, pp. 7-11, Jan. 1961.

3811 Frosch, C. J. and Derick, L., Preparation and Floating Zone Processing of Gallium Phosphide. J. Electrochem. Soc., 108, pp. 251-257, Mar. 1961.

3812 Fuller, C. S., Kaiser, W., and Thurmond, C. D., Donor Equilibria in the Germanium-oxygen System, Phys. and Chem. of Solids, 37, pp. 301-307, Jan. 1961.

3813 Geschwind, S., Paramagnetic Resonance of Fe<sup>2+</sup> in Octahedral and Tetrahedral Sites in Garnet, Phys. Rev. 121, pp. 363-374, Jan. 15, 1961. 3814. Goldthwaite, L. R., Failure Rate Study for Lognormal Lifetime Model, 1961 Proc. of Seventh Natl. Symp. on Reliability and Quality Control in Electronics, pp. 208–213.

3815 Jonas, L. A. and Hanseom, F. E., High Voltage Static Eliminators for Teletypewriters. A.I.E.E. Trans., 51, Pt. 1., pp. 576-579, Nov. 1960.

3816 Kaiser, W. and Thurmond, C. D., Solubility of Oxygen in Germanium, J. Appl. Phys., 32, pp. 115-118, Jan. 1961.

3817 Kinariwala, B. K., Necessary and Sufficient Condition for Existence of ±R, C Networks. I.R.E. Trans. on Circuit Theory, CT-7, pp. 330-335, Sept. 1960.

3818 Kleinman, D. A. and Schawlow, A. L., Corbino disk, J. Appl. Phys., 31, pp. 2176–2187, Dec. 1960.

3819 McSkimin, H. J., Pulse Superposition Method for Measuring Ultrasonic Wave Velocities in Solids, J. Acoustical Soc. Amer., 33, pp. 12-16, Jan. 1961.

3820 Merrill, F. G., Frequency and Time Standards, I.R.E. Trans. on Instrumentation, I-9, pp. 117-120, Sept. 1960.

3821 Miller, C. E., Ionic Distribution in Garnets Gd<sub>3</sub>Al<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> and Y<sub>4</sub>Al<sub>3</sub>-Fe<sub>2</sub>O<sub>12</sub>, Phys. and Chem. of Solids, 37, pp. 229-231, Jan. 1961.

3822 Miller, R. C., On Origin of Barkhausen Pulses in BaTiO<sub>3</sub>, Phys. and Chem. of Solids, 17, pp. 93–100, Dec. 1960.

3823 Myers, O., New Nation-wide Telephone Numbering Plan, A.I.E.E. Trans., 52, Pt. 1, pp. 673-675, Jan. 1961.

3824 Nussbaum, E., Irland, E. A. and Young, C. E., Statistical Analysis of Logic Circuit Performance in Digital Systems, Proc. I.R.E., 49, pp. 236-244, Jan. 1961.

3825 Ollom, J. F. and Von Aulock, W.

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3826 Pappalardo, R. and Wood, D. L., Spectrum of Yb<sup>3+</sup> in Yttrium Gallium Garnet. J. Chem. Phys., 33, pp. 1734–1742, Dec. 1960.

3827 Rossol, F. C., Subsidiary Resonance in Coincidence Region in Yttrium Iron Garnet, J. Appl. Phys., 31, pp. 2273-2275, Dec. 1960.

3828 Russell, C. A., Determination of Relative Isotactic Content of Polypropylene by Extraction, J. Polymer Sci., 4, pp. 219-224, Sept./Oct. 1960.

3829 Sharpe, G. and Spain, B., Solution for Networks by Means of Equicofactor Matrix. I.R.E. Trans on Circuit Theory, CT-7, pp. 230-239, Sept. 1960.

3830 Sinden, F. W. and Mammel, W., Geometric Aspects of Satellite Communication, I.R.E. Trans. on Space Electronics and Telemetry, SET-6, pp. 146-157, Sept./Dec. 1960.

3831 Smith, W. L., Miniature Transistorized Crystal-Controlled Precision Oscillators, I.R.E. Trans. on Instrumentation, I-9, pp. 141-148, Sept. 1960.

3832 Sugano, S., Schawlow, A. L. and Varsanyi, F., Zeeman Effect of the Purely Cubic Field Fluorescence Line of MgO:Cr<sup>5+</sup> Crystals, Phys. Rev., 120, pp. 2045–2053, Dec. 15, 1960.

3833 Tanenbaum, M. and Mills, A. D., Preparation of Uniform Resistivity n-type Silicon by Nuclear Transmutation, J. Electrochem. Soc., 108, pp. 173-178, Feb. 1961

3834 Wertheim, G. K., Hyperfine Structure of Fe<sup>57</sup> in Paramagnetic and Antiferrogmagnetic FeF<sub>2</sub>, Phys. Rev. 121, pp. 63-66, Jan. 1, 1961.

3835 Whelan, J. M., Struthers, J. D. and Ditzenberger, J. A., Separation of Sulfur, Selenium and Tellurium from Arsenic, J. Electrochem. Soc., 107, pp. 982-985, Dec. 1960.

3836 Chynoweth, A. G., Feldmann, W. L. and Logan, R. A., Excess Tunnel Current in Silicon Esaki Junctions, Phys. Rev., 121, pp. 684-694, Feb. 1, 1961.

3837 Douglass, D. C., McGall, D. W. and Anderson, E. W., Self-diffusion of Nearly Sperical Molecules, J. Chem Phys., 34, pp. 152-156, Jan. 1961.

3838 Ahearn, A. J., Mass Spectrographic Studies of Impurities on Surfaces, Sixth Natl. Symp. on Vacuum Technology Trans. pp. 1-5.

3839 Becker, G. E., Adsorption of Gases on Mercury at 77° K, Sixth Natl. Symp. on Vacuum Technology Trans. pp. 197-203.

3851 Ehrhardt, R. A., Acid Gold Plating, Forty-Seventh Annual Tech. Proc., pp. 78–82.

3852 Geller, S., Superexchange Interaction and Ionic Distribution in Substituted Rare-earth Garnets, Phys. and Chem. of Solids, 16, pp. 21-29, Jan. 1960.

3853 Law, J. T., Surface Properties of Vacuum Cleaned Silicon, Phys. and Chem of Solids, 14, pp. 9-21, July 1960.

3855 Ligenza, J. R., Initial Stages of Oxidation of Germanium, J. Phys. Chem., 64, pp. 1017–1022, Aug. 1960.

3856 Lundberg, J. L., Hellman, M. Y. and Frisch, H. L., Study of Polydispersity of Polymers by Viscometry, J. Polymer Sci., 46, pp. 3-17, Sept. 1960.

3857 Ligenza, J. R. and Spitzer, W. G., Mechanisms for Silicon Oxidation in Steam and Oxygen, Phys. and Chem. of Solids, 14, pp. 131-136, July, 1960.

3858 Wolff, P. A., Theory of Optical Radiation from Breakdown Avalanches in Germanium, Phys. and Chem. of Solids, 16, pp. 184-190, Nov. 1960.

3859 Wolfstirn, K. B., Hole and Electron Mobilities in Doped Silicon, Phys. and Chem. of Solids, 16, pp. 279-284, Nov. 1960.

3860 Spitzer, W. G., and Ligenza, J. R., Oxygen Exchange Between Silica and High Pressure Steam, Phys. and Chem. of Solids, 27, pp. 196-202, Jan. 1961.

3861 Van Uitert, L. G. and Soden, R. R., Emission Spectra of Trivalent Thulium, J. Chem. Phys., 34, pp. 276-279, Jan. 1961

3862 Hawkins, W. L., Matreyek, W. and Winslow, F. H., Morphology of Semicrystalline Polymers. J. Polymer Sci., 41, pp. 1-11, Dec. 1959.

3863 Shulman, R. G., Nuclear Magnetic Resonance and Magnetic Ordering in NiF<sub>2</sub>, Part I Phys. Rev. 121, pp. 125–143, Jan. 1, 1961; Part II, J. Appl. Phys. 2, pp. 1268-1288, Mar. 1961.

3864 Mathews, M. V., Miller, J. E. and David, E. E., Jr., Pitch Synchronous Analysis of Voiced Sounds, J. Acoustical Soc. Amer., 33, pp. 179-186, Feb. 1961.

3865 Mumford, W. W., Some Technical Aspects of Microwave Radiation Hazards, Proc. I.R.E., 49, pp. 427-447 Feb. 1961.

3866 Anderson, W. W. and Hines, M. E. Wide-Band Resonance Isolator, I.R.E. Trans. on Microwave Theory and Techniques, MTT-9, pp. 63-67, Jan. 1961.

3867 Sharpless, W. M., Gallium-Arsenide Point-Contact Diodes, I.R.E. Trans. on Microwave Theory and Techniques, MTT-9, pp. 6-10, Jan. 1961.

3868 Tatsuguchi, I., UHF Strip Transmission Line Hybrid Junction, I.R.E. Trans. on Microwave Theory and Techniques, MTT-9, pp. 3-6, Jan. 1961.

3869 Harvey, F. K. and Schroeder, M. R., Subjective Evaluation of Factors Affecting 2-Channel Sterophony, J. Audio Engr. Soc. 9, pp. 19–28, Jan. 1961.

- 3870 Clogston, A. M. and Jaccarino, V., Susceptibilities and Negative Knight Shifts of Intermetallic Compounds, Phys. Rev. 121, pp. 1257–1362, Mar. 1, 1961.
- 3871 Wernick, J. H. and Haszko, S. E., Maganese Rare-Earth Compounds with the MgZn<sub>2</sub> Structure, Phys. and Chem. of Solids, 18, pp. 207-209, Feb. 1961.
- 3872 Spitzer, W. G. and Kleinman, D. A., Infrared Lattice Bands of Quartz, Phys. Rev., 121, pp. 1324–1335, Mar. 1, 1961.
- 3873 Reiss, H. and Helfand, E., Analytical Solutions for Some Zone Melting Problems, J. Appl. Phys., 32, pp. 228-232, Feb. 1961.
- 3874 Forrester, P. A. and Mims, W. B., Seesaw Maser Operation, J. Appl. Phys., 32, pp. 317–320, Feb. 1961
- 3875 Becker, J. A., Becker, E. J., and Brandes, R. G., Reactions of Oxygen with Pure Tungsten and Tungsten Containing Carbon. J. Appl. Phys., 32, pp. 411–423, Mar. 1961.
- 3876 Riney, T. D., Residual Thermoelastic Stresses in Bonded Silicon Wafers, J. Appl. Phys., 32, pp. 454– 460, Mar. 1961.
- 3877 Young, C. E., Space Charge in Semiconductors, J. Appl. Phys., 32, pp. 329-332, Mar. 1961.
- 3878 Garrett, G. C. B., The Optical Maser, Elec. Eng'g, 8., pp. 248-251, Apr. 1961.
- 3880 Meiboom, S., Nuclear Magnetic Resonance Study of the Proton Transfer in Water, J. Chem. Phys., 34, pp. 375-388, Feb. 1961.
- 3881 Treuting, R. G. and Abrahams, S. C., Evaluation of Electron Density in a General Plane, Acta Crystallographica, 14, pp. 190-194, Feb. 1961.
- 3882 Helfand, E., Frisch, H. L. and Lebowitz, J. L., Theory of Two- and One-Dimensional Rigid Sphere Fluids. J. Chem. Phys., 34, pp. 1037-1042, Mar. 1961.

- 3883 Trumbore, F. A., Freeland, P. E. and Logan, R. A., Distribution Coefficient of Antimony in Silicon from Solvent Evaporation, J. Electrochem. Soc., 108, pp. 458-460, May 1961.
- 3897 Guldner, W. G., Determination of Oxygen, Hydrogen, Nitrogen and Carbon in Metals, Talanta, 8, pp. 191–202, Apr. 1961.
- 3898 Nelson, L. S. and Kuebler, N. A., Heterogeneous Flash Pyrolysis of Hydrocarbon Polymers, Phys. Chem. in Aerodynamics and Space Flight, 3, pp. 61-67, 161.
- 3899 Yariv, A. and Cook, J. S., Noise Investigation of Tunnel Diode Microwave Amplifiers, Proc. I.R.E., 39, pp. 739-743, Apr. 1961.
- 3902 Bennett, W. R., Amplification in Nonlinear Reactive Networks, I.R.E. Trans. on Circuit Theory CT-7, pp. 440-446, Dec. 1960.
- 3904 Laudise, R. A., Cerocket, J. H., and Ballman, A. A., Hydrothermal Crystallization of Yttrium Iron Garnet and Yttrium Gallium Garnet J. Chem. Phys., 65, pp. 359–361, Feb.
- 3905 Lewis, J. A., Generalized Thermal Resistance, Quart. Appl. Math., 19, pp. 76-80, Apr. 1961.
- 3906 Tukey, J. W., Emphasizing the Connection between Analysis of Variance and Spectrum Analysis, Technometrics, 3, pp. 191-219, May 1961.
- 3907 Bennett, W. R. and Froehlich, F. E., Effectiveness of Error-control Procedures in Digital Data Transmission, I.R.E. Trans. on Comm. Sys., CS-9, pp. 58-65, Mar. 1961.
- 3929 Adler, R., Ashkin, A. and Gordon E. I., Excitation and Amplification of Cyclotron Waves and Thermal Orbits, J. Appl. Phys. 32, pp. 672-675, Apr. 1961.
- 3935 Schawlow, A. L., Optical Masers, Sci. Amer. 204, pp. 52-61, June 1961.

November, 1961

